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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/743,149 | 12/23/2003 | Susuma Tanaka | 0229-0787P | 7468 |

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| EXAMINER |
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MAKI, STEVEN D

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| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/743,149

Applicant(s)

TANAKA, SUSUMA

Examiner

Steven D. Maki

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1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 122303.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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1) Figures 10(A) and 10(B) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Iwamura

3) **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al (US 6374885) in view of Iwamura (US 2003/0029537 or EP 1277599).**

As to EP 1277599, Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Uchida et al discloses a pneumatic tire having a tread including blocks, grooves and zigzag sipes wherein the tread comprises tread rubber and 2-30 parts short fibers. The **zigzag sipes** are formed by pressing thin plates in the tread rubber during vulcanizing whereby the thin plates orient the short fibers in a radial direction. Uchida et

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al does not recite providing the zigzag sipe such that (a) the zigzag part gradually moves in one direction and then in an opposite direction thereto or (b) changing the lengths of the zigzag part.

As to claims 1 and 9, it would have been obvious to one of ordinary skill in the art to provide Uchida et al's zigzag sipes such that the zigzag part gradually moves in one direction and then in an opposite direction thereto since Iwamura teaches providing zigzag sipes for blocks in a tire tread with a longitudinal oscillating zigzag part such that the walls of the sipe engage and support each other so that the on-ice performance is greatly improved.

As to claim 2, the suggested longitudinal is parallel with the centerline of the zigzag.

As to claim 3, see figure 4 of Iwamura.

As to claim 4, Uchida et al teaches a sipe spacing of less than 10 mm.

As to claim 5, Iwamura suggests a zigzag amplitude of 1-10 mm and a zigzag pitch of 60-100% the zigzag amplitude.

As to claims 6-8, Iwamura suggests obtaining the longitudinal oscillating using parallelograms and a displacement amount L_a of 0.3 to 4 mm.

Beckmann et al

4) **Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al in view of Beckman et al (US 5350001) and optionally Japan 106 (JP 4-306106).**

Uchida et al is discussed above.

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As to claims 1 and 9, it would have been obvious to one of ordinary skill in the art to provide Uchida et al's zigzag sipes such that the zigzag part gradually moves in one direction and then in an opposite direction thereto since Beckmann et al suggests providing incisions (sipes) with a three dimensional configuration including a zigzag part moving in one direction and then in an opposite direction (figure 3b or figure 4b) such that the walls of the incisions can only slide off each other with difficulty so that irregular wear is suppressed and energy is converted to heat through friction and skid is reduced.

As to claim 2, see figure 4b of Beckmann et al

As to claim 3, see figure 3b of Beckmann et al.

As to claim 4, Uchida et al teaches a sipe spacing of less than 10 mm.

As to claim 5, it would have been obvious to one of ordinary skill in the art to use the claimed amplitude and pitch in view of (1) Uchida et al's teaching to use zigzag sipes as shown in figure 2, (2) Beckmann et al's suggestion to displace zigzags of a sipe having an embossing depth (amplitude) of 0.5 - 3 mm and length D" and optionally (3) Japan 106's teaching to use pitches $P1 = 4.5$ mm, $P2 = 3.0$ mm, $P3 = 1.5$ mm for the zigzag trace of a sipe (see table on page 4).

As to claims 6-8, it would have been obvious to provide Uchida et al's sipes with the claimed configuration (parallelograms / displacement amount) since Beckmann et al suggests using parallelograms to form the wall of the sipe having a zigzag part moving towards a direction and then the opposite direction (figure 3b). The claimed displacement of 0.3 - 4 mm would have been obvious in view of (a) Beckmann et al's suggestion to displace zigzags of a sipe having an embossing depth of 0.5 - 3 mm and

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optionally (b) Japan 106's teaching to use pitches $P1 = 4.5$ mm, $P2 = 3.0$ mm, $P3 = 1.5$ mm for sipe having a zigzag trace in the radial direction (see table on page 4).

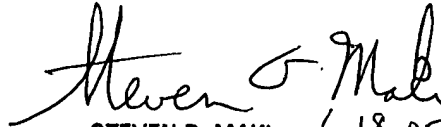
Remarks

- 5) The remaining references are of interest.
- 6) No claim is allowed.
- 7) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on (571) 272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki
June 18, 2005


STEVEN D. MAKI
PRIMARY EXAMINER
~~GROUP 1300~~
Av 1733 6-18-05